



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,683	09/27/2001	Daoben Li	10748-006-999	5473
20583	7590	02/06/2004	EXAMINER	
JONES DAY 222 EAST 41ST STREET NEW YORK, NY 10017			CORRIELUS, JEAN B	
			ART UNIT	PAPER NUMBER
			2631	
			DATE MAILED: 02/06/2004	

15

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/966,683

**Applicant(s)**

LI, DAOBEN

**Examiner**

Jean B Corrielus

**Art Unit**

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-12, 14-27, 29-34, 36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12, 14-24, 30, 31, 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 25-27, 29 and 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2631

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because of the following informalities: page 11, line 3 states that each code-word has 16 pulses. However, fig. 1 of the drawing shows the first codeword as having 17 pulses.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 24-27, 29-34 and 36-37 are objected to because of the following informalities: consider claim 24, for instance, a goal to “a memory” is set forth in the preamble, however, the body of the claim does not include any limitations to the structure of a memory. The same comment applies to claim 31 and to all the dependent claims.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Art Unit: 2631

Claims 10-12, 14-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims, when taken as a whole, only generate a sequence of pulses. A sequence of pulses, however, is just **a signal** per se, i.e. a signal that is not tied to any physical structure for transmitting or receiving the signal.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Miseki Kimio et al JP 430177900A.

Miseki Kimio et al discloses a method and apparatus comprising see fig. 4: generating a plurality of pulse-trains each comprising a plurality of pulses separated by intervals see (Abstract and fig. 4), each one of the plurality of intervals is unequal in duration see (Abstract and fig. 4), assigning a polarity to each of the pulses thus forming at least one code word from each of the pulse trains see (fig. 4 and abstract).

As per claim 14, each codeword is inherently unique within the plurality of code words.

Art Unit: 2631

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 18, 19, 21, 24, 31, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miseki Kimio et al.

As per claims 21 and 37, as applied to the above claims, Miseki Kimio et al teaches every feature of the claimed invention but does not explicitly teach the code is a barker code. However, the used of a Barker code is old and well established in the art. It would have been obvious to one skill in the art to use such a code so as to take advantage of its good correlation properties.

As per claim 16, it would have been obvious to one skill in the art to configure Miseki Kimio in such a way that cross-correlation function between any two of the code words has side lobes equal to zero in order to prevent distortion to succeeding codewords.

As per claims 18-19, it would have been obvious to one skill in the art to increase the duty ratio of each code by representing each a positive code associated with a +1

Art Unit: 2631

pulse and a negative code associated with a -1 pulse so as to satisfy system coding requirements.

As per claims 24 and 31, it would have been obvious to one skill in the art to implement the invention in the spread spectrum multiple access environment so as to enhance system integrity.

As per claim 36, it would have been obvious to one skill in the art to associate a positive compression code with a +1 pulse and a negative compression code with a -1 pulse. The reason to do so would have been the same as provided above in reference to claim 18-19.

***Allowable Subject Matter***

6. Claims 25-27, 29 and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**(703) 872-9314

Art Unit: 2631

(for informal or draft communications, please label "PROPOSED"  
or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington. VA., Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Jean B. Corrielus whose telephone number is (703) 305-4023.  
The examiner can normally be reached on Monday-Thursday from 7:00 A.M. to 5:30 P.M.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Group receptionist whose telephone number is  
(703) 305-3800.

  
Jean B. Corrielus

Primary Examiner

TC-2600

2/5/04